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ABSTRACT

This research study sought to examine the degree of heterophily which was indicated between principals and teachers regarding the perceived adequacy of school conditions. The sample comprised principals and teachers randomly selected from five regions. Three of the regions focused on science teachers while the other two involved mathematics teachers. These regions included 15 states scattered throughout the western three-fourths of the country. The questionnaire included 27 Likert-type items which asked respondents to rate aspects of their instructional setting. Items were clustered to assess teacher effectiveness, teaching load, curriculum facilities and support staff. Multivariate and univariate analysis of variance were used to analyze data. Results showed that principals possessed a more positive view of teaching conditions than did science and mathematics teachers. Also, four of the five comparisons were significant. It was concluded that the two groups of principals and teachers were heterophilous. (HM)

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RESEARCH PAPER #7

Adequacy of Teaching Conditions as Perceived by Administrators and Teachers

Robert Reineke and Wayne Welch

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ADEQUACY OF TEACHING CONDITIONS AS PERCEIVED BY ADMINISTRATORS AND TEACHERS

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The United States educational system has, like other major institutions and business enterprises over the past half century, experienced a steady growth of specialization and concurrent organizational expansion. Factors contributing to this expansion include a rising student population, increased educational services, and consolidation of school districts. This organizational expansion created new and demanding functions with respect to leadership and coordination and gave rise to the administrative role. Since the initial dichotomization of roles which distinguished teachers from administrators, there has been an increase in the emphasis toward specialization. Administrators have developed their own cohesive group as a result of selection procedures, specialized education programs, professional organizations, and functions. These administrative functions can be grouped according to whether they refer to leadership (line function), such as establishing and maintaining the school's educational philosophy, or refer to service activities (staff functions) such as class scheduling or maintaining discipline.

While at times providing service requirements (staff functions), the school principal has traditionally been recognized as the educational

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leader (line function) within the school. The leadership style among principals ranges from an authoritarian to a laissez-faire approach, with most falling somewhere between these extremes. Regardless of the style used, the leadership function must be performed. Castetter (1971) defines leadership in the following terms; "to guide the efforts of subordinates toward attainment of organizational objectives" and further, "The leader is one who is able to communicate to others the nature of system plans that are to be put into effect and the methods designed to achieve them." This definition emphasizes the need for communication in accomplishing organizational goals.

Rogers & Shoemaker (1971) discuss the relationship between communication and the similarity of speaker and listener. They use the term heterophily to describe the existence of differences between individuals or groups of individuals. In addition, Rogers & Shoemaker hypothesize that, as groups become more heterophilous, communication between them will become more difficult. To the extent that administrators and teachers have become distinct groups through their selection, education, and professional organizations, one group will be heterophilous with respect to the other. The present study seeks to examine the degree of heterophily which is indicated between principals and teachers regarding the perceived adequacy of school conditions. The identification of perceptual mismatches between teachers and principals would appear to be an important first step in improving the educational environment of our schools.

Method

As a part of the evaluation of the National Science Foundation Comprehensive Program for Teacher Education (Welch & Gullickson, 1973),

questionnaires probing various aspects of secondary schools were administered to principals and teachers. Included were 27 Likert-type items which asked respondents to rate aspects of their instructional setting. Items were clustered to assess teacher effectiveness, teaching load, curriculum, facilities, and support staff. Item wording was identical for both the "Principal" and "Teacher" questionnaires. Principals were asked to rate conditions as they applied to the science or mathematics teachers in their schools while the teachers were asked to rate conditions as they applied to themselves. The five-point rating scale ranged from five (excellent) to one (much improvement needed). The midpoint was three (satisfactory).

The sample comprised principals and teachers randomly selected from five NSF Project impact and control regions (Gullickson & Welch, 1972). Three of the regions focused on science teachers while the other two involved mathematics teachers. These regions included 15 states scattered throughout the western three-fourths of the country. Utilizing the individual school as the primary sampling unit selection was made from a list of schools, stratified by city size (four levels) and subject matter. A total of 1,074 principal and teacher questionnaires were completed. Because the purpose of this study was to explore the perceptions of principals and teachers within the same schools, the final sample (N = 984) was obtained by considering only those schools in which both the principal and teacher had completed questionnaires. Further, it is pertinent to note that the sampling procedure stated that within each school, the principal would randomly select one teacher (science or mathematics as appropriate) to complete the teacher

questionnaire. The principal-teacher data described herein thus derives from paired observations (492 principals and 492 teachers) of conditions within the same schools.

As stated above, the 27 items referring to school conditions were grouped into five logical clusters. The analysis was performed on the combined scores of items within each cluster. Scott's Scale Score analysis (Scott, 1972) was used to determine the homogeneity of items within each cluster. Scale reliabilities are shown in Table 1.

Insert Table 1 about here

In order to test the perceptions of teachers and principals regarding the adequacy of teaching conditions, means were compared on each of the five scales. A one-way multivariate analysis of variance (Finn, 1968) was used to compare the teachers' and principals' perceptions. The multivariate aspect allows us to consider the scores on all five scales simultaneously and to test the null hypothesis of no overall effect. If the null hypothesis is rejected, then justification is provided for examining the univariate effects. This procedure prevents the chance occurrence of significant F's when making multiple F test comparisons.

Results

The comparison of the principals' and teachers' perceptions of teaching conditions is shown in Table 2. The overall F ratio was highly significant and justified examination of the univariate F tests. It is apparent that principals possess a more positive view of teaching conditions than do science and mathematics teachers. Four of the five

Table 1

Internal Consistency Reliabilities

Scale	Reliabilities for Principal Sample (N = 492)	Reliabilities for Teacher Sample (N = 492)	Reliabilities for Combined Group (N = 984)
Effectiveness (7)	.83	.62	.74
Load (4)	.80	.77	.81
Curriculum (4)	.83	.80	.82
Facilities (9)	.89	.86	.88
Support (3)	.68	.67	.68

NOTE: Numbers in parentheses are the number of items per scale.

comparisons were significant at the $\rho<.05$ level. These perceptual differences are particularly strong for teaching load, curriculum materials, and facilities.

Insert Table 2 about here

It is further noted in Table 2 that both groups rate teacher effectiveness highest while availability of support staff is rated lowest.

Conclusions and Discussion

The results shown above yield information related to three areas; (1) the relative adequacy of conditions described by the five scales, (2) the consistency of principals' higher perceptions of conditions than teachers', and (3) the areas perceived differently by principals than teachers.

Principals tended to rate the teaching conditions satisfactory or above except for the availability of support staff (secretaries, lab assistants, paraprofessionals). Teachers, on the other hand, rated three of the five areas; load, facilities, support, as less than satisfactory. Their mean rating was 2.89 on the five-point scale below the satisfactory point.

The order of perceived adequacy of conditions described by the five scales is identical for the principal and teacher groups with teaching effectiveness considered most adequate. The same data reflect that principals view the conditions in their schools considerably more favorably than do teachers. The reasons for these perceptual differences may arise from locus of control considerations. The major

Table 2

Multivariate Analysis of Variance of Teachers' and Principals' Perceptions of Teaching Conditions

Multivariate F = 25.09, $\rho<.0001$

Degrees of Freedom = (5,978)

Scale	Means		Pooled Standard Deviation	Univariate F
	Principal	Teacher		
Effectiveness	3.69	3.61	.56	4.86*
Curriculum	3.43	3.13	.76	38.25**
Load	3.39	2.83	.82	115.62**
Facilities	3.03	2.74	.82	31.07**
Support	2.28	2.18	.85	3.07

Degrees of Freedom = (1,982)

*$\rho<.05$

**$\rho<.01$

differences ($p<.01$) between the two groups; curriculum, teaching load and facilities, would seem to contain more of an administrative component than a teacher component. If this is the case, the degree of potential difference in perceptions of conditions between principals and teachers could be viewed in terms of the magnitude of perceived administrative control relative to each area. Thus, while the principal may not be able to materially improve the facilities of the school, he may rate them higher because of his relation to budget planning and associated problems. The teacher on the other hand, may rate quality of facilities against an ideal instructional setting, with relatively less attention paid to associated costs or to competing demands for fiscal resources.

A competing explanation arises from the hypothesis discussed earlier in the paper. Namely, that principals and teachers have become distinct groups through their selection, specialization of function, and professional interests and that effective communication between them is lacking. In Rogers & Shoemaker terms, the results of this study suggest the groups are heterophilous. The groups are unaware of each others perceptions--perceptual differences that perhaps would explain why the principal denies a teacher's request for a new microscope or additional laboratory stations.

Whether the differences arise from control and responsibility biases or from the differing perspectives of the two groups, it is clear that differences do exist. It seems likely that these perceptual mismatches would have a detrimental effect on the learning environment of the school.

A first step has been taken in this study in identifying the existence of a problem. An important next step would appear to be improved principal-teacher communications. And although it cannot be concluded with certainty that differences in perceptions result from communication problems, improved communication between teachers and administrators seems most appropriate.

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